

CONFIDENTIAL

October 1, 1958

(1 RAD/CC 25D)

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25X1

Dear [redacted]

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We are very pleased to forward our silicon solar energy converter information for your application, as described in our telephone conversation of September 30, 1958.

For your requirement to supply 24 volts at three ma. continuous duty, or 0.08 ah. per day, a power supply consisting of silicon solar energy converter panel, nickel-cadmium storage battery, and a blocking diode are required. The silicon solar energy converter may be built up from basic module elements, type 49-0230. For an installation, assuming the solar panel to be mounted on a flat plate at an optimum angle to the sun, a total number of 34 modules are required; these modules are connected 17 in series, and two strings in parallel. On a typical sunny day, assuming a peak radiation of 70 milliwatts per square centimeter, this battery will charge at a rate of approximately 0.2 amp. hours per day; this assumes a peak charging rate of five hours per day, which is a fairly conservative estimate.

The mechanical outline for a solar energy converter panel, consisting of 34 modules, type 49-0230, occupies a minimum area of 78 square inches, with additional space provided for mounting.

Typical storage batteries recommended for this power supply are the types 20 VO-.8, manufactured by the Gulton Manufacturing Co. Metuchen, New Jersey, or alternately, two series connected batteries, type 1L420, manufactured by Sonotone Corporation, Elmsford, New York.

The silicon blocking diode recommended for this application is our type 5MS5, as described in the attached data sheet, SR-203.

We are very pleased to quote to you on the 49-0230 silicon solar battery module, and the blocking diode as follows:

OUR TYPE	PRICES EACH NET		
	<u>1 - 49</u>	<u>50-99</u>	<u>100 and up</u>
49-0230	\$24.00	\$20.00	\$18.00
5MS5	1.75	1.53	1.10

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Our terms are net 30 days, f.o.b. [redacted] with freight allowed 25X1 on orders in excess of \$150.00. Shipment of the solar battery modules may be made within four to six weeks after receipt of order. The blocking diode, type SMS5, may be shipped as required.

In addition to the above design recommendation on the module components required for this power supply design, we are able to quote to you on a complete solar panel, consisting of the series-parallel connected solar cell modules, as well as blocking diode. A slight additional charge will apply on such a mounted unit; the final price will depend upon the type of materials, mounting techniques, and finish that you desire.

We would like to point out that the above recommendation for a silicon solar energy converter, is representative for a typical installation. In unusual climates, or atmospheric conditions where the daily solar radiation differs considerably from the average described above, a larger number, or smaller number of parallel strings of solar cells may be required. The modular construction in which our design is offered, will permit you to accommodate a wide range of conditions.

If we may be of further assistance to you, [redacted] please do not hesitate to call on us. 25X1

Very truly yours,

HN/jk
Enc: SR-203
Dwg. 49-0230

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